

TO: Board Members

THROUGH: Kevin Patteson, Executive Administrator
Les Trobman, General Counsel
Lisa Glenn, Deputy Executive Administrator, Operations and Administration
Mike Segner, Manager, Flood Mitigation Planning

FROM: Gilbert R. Ward, Grants Coordinator, Flood Mitigation Planning

DATE: April 25, 2014

SUBJECT: Fiscal Year 2014 Solicited Flood Protection Planning Grant Applications

ACTION REQUESTED

Consider authorizing the Executive Administrator to: (a) negotiate and execute contracts on or before September 2, 2014 in a total amount not to exceed \$900,000 for solicited grant applications for Flood Protection Planning; and (b) transfer funds from the Water Assistance Fund to the Research and Planning Fund.

BACKGROUND

Grants for flood protection planning have been in existence since first established as part of the Research and Planning Fund program in 1983. To date, the Texas Water Development Board (TWDB) has awarded one-hundred twenty seven (127) Flood Protection Planning grants totaling nearly \$20,350,000 in funding assistance. The purpose of the Flood Protection Planning grant program is to enable the state to assist local governments in developing flood protection plans for entire major or minor watersheds (as opposed to local drainage problems) in order to provide protection from flooding through structural and/or non-structural measures. Applications for Flood Protection Planning grants are authorized and described by 31 Texas Administrative Code (TAC) §355.3. Planning for flood protection will include studies and analyses to determine and describe problems resulting from or relating to flooding. Input from the affected public relative to the flood hazard will be incorporated into the planning process. From the planning study, feasible solutions to flooding problems will be identified and recommendations will be provided. Flood Protection Planning grants require a 50 percent local match unless the planning area meets the economically disadvantaged criteria for this program, as per 31 TAC §355.10. Those planning areas that meet the economically disadvantaged criteria require a 25 percent local match.

Our Mission : Board Members

To provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas

Carlos Rubinstein, Chairman | Bech Bruun, Member | Kathleen Jackson, Member
Kevin Patteson, Executive Administrator

KEY ISSUES

A total of \$900,000 has been budgeted for Flood Protection Planning grants from the Research and Planning Fund for Fiscal Year 2014, and TWDB staff published a Request for Applications (RFA) in the October 4, 2013 *Texas Register* (see Attachment A). Nine applications were received by the designated submittal deadline date of January 22, 2014 for a total requested funding of \$1,712,311. Using eligibility criteria guidance provided in 31 TAC 355.5(3), all nine grant applications were determined to be eligible for review and consideration. Attachment B provides summary descriptions of each of the applications.

Evaluation criteria used by TWDB staff to review, score and rank the nine applications included population and value of property at risk due to flooding, severity of the existing flood hazard, financial capabilities of the applicant to implement the mitigation alternatives recommended by the study, responsiveness to the RFA, and technical merit of the proposed scope of work. Attachment C indicates Staff's funding recommendation in ranked order, totaling \$900,000. Staff does recommend approval of partial funding to the second place application which was submitted by the Brazos River Authority (BRA). Because of the amount of funds BRA is requesting, and the schedule proposed by BRA to complete their scope of work, staff recommends to approve funding to BRA in the amount of \$514,783.50 with the understanding that the additional funding currently being requested will be available to BRA during the 2015 funding cycle. This will enable us to fully fund the request for the fourth place application from Guadalupe-Blanco River Authority (GBRA).

STAFF RECOMMENDATION

TWDB staff recommends authorizing the Executive Administrator to negotiate and execute contracts on or before September 2, 2014 in a total amount not to exceed \$900,000 for solicited Flood Protection Planning grant applications as follows: City of Georgetown for \$200,000; Brazos River Authority for \$514,783.50; City of Conroe for \$135,216.50; and Guadalupe-Blanco River Authority for \$50,000 (see Attachment C).

Attachment A: Announcement Published in October 4, 2013 *Texas Register*
Attachment B: Application Summaries
Attachment C: Staff Recommendations for FY 2014 Flood Protection Planning Grants

This recommendation has been reviewed by legal counsel and is in compliance with applicable statutes and TWDB rules.

Les Trobman, General Counsel

ATTACHMENT A

Announcement Published in October 4, 2013 Texas Register

Texas Water Development Board Request for Applications for Flood Protection Planning

The Texas Water Development Board (TWDB) requests, pursuant to 31 Texas Administrative Code (TAC) §355.3, the submission of applications leading to the possible award of contracts to develop flood protection plans for areas in Texas from political subdivisions with the legal authority to plan for and abate flooding and which participate in the National Flood Insurance Program. Flood Protection Planning Grant applications may be submitted by eligible political subdivisions from any area of the State and will be considered and evaluated. In addition, applicants must supply a map of the geographical planning area to be studied.

Description of Planning Purpose and Objectives. The purpose of the Flood Protection Planning Grant Program is for the State to provide financial assist to local governments to develop flood protection plans for entire major or minor watersheds (as opposed to local drainage areas) that provide protection from flooding through structural and non-structural measures as described in 31 TAC §355.2. Planning for flood protection will include studies and analyses to determine and describe problems resulting from or relating to flooding and the views and needs of the affected public relating to flooding problems. Potential solutions to flooding problems will be identified, and the benefits and costs of these solutions will be estimated. From the planning analysis, feasible solutions to flooding problems will be recommended. The flood protection planning study should also include an assessment of the environmental and cultural resources of the planning area as necessary to evaluate the flood control alternatives being considered. Solutions for localized drainage problems are not eligible for grant funding.

Description of Funding Consideration. Up to \$900,000 has been initially authorized for Fiscal Year 2014 assistance for flood protection planning from the TWDB's Research and Planning Fund. Up to fifty percent funding may be provided to individual applicants, with up to seventy-five percent funding available to areas identified in 31 TAC §355.10(a) as economically disadvantaged. In the event that acceptable applications are not submitted, the TWDB retains the right to not award contract funds.

Deadline, Review Criteria, and Contact Person for Additional Information. Six double-sided copies on recycled paper and one digital copy (CD) of a complete Flood Protection Planning Grant application including the required attachments must be filed with the Board prior to noon, 12:00 p.m., January 22, 2014. Applications can be directed either in person to Mr. David Carter, Texas Water Development Board, Stephen F. Austin Building, 1700 North Congress Avenue, Austin, Texas or by mail to Mr. David Carter, Texas Water Development Board, P.O. Box 13231 - Capitol Station, Austin, Texas 78711-3231. Applications will be evaluated according to 31 TAC §355.5. All potential applicants can contact the TWDB to obtain these rules and an application instruction sheet. Requests for information, the TWDB's rules and instruction sheet covering the research and planning fund may be directed to Mr. Gilbert Ward at the preceding mailing address, or by email at gilbert.ward@twdb.texas.gov or by calling (512) 463-6418. This information can also be found on the Internet at the following address: <http://www.twdb.texas.gov>.

Issued in Austin, Texas
Ken Petersen
General Counsel
Texas Water Development Board

ATTACHMENT B

Application Summaries

City of Georgetown

Research and Planning Fund Category:

Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$400,000
Amount Requested from TWDB	\$200,000
Local Cash	\$150,000
Local In-kind	\$50,000

Participants:

City of Georgetown	Capital Area Council of Governments
Williamson County	City of Jarrell
Brazos River Authority	Jarrell Independent School District
Georgetown Chamber of Commerce	City of Weir
Georgetown Independent School District	Florence Independent School District
Georgetown Economic Development Corporation	Liberty Hill Independent School District
Texas Department of Transportation	

Problem Area: Berry Creek, Mankins Branch, Pecan Branch, Smith Branch, and Middle Fork of San Gabriel River watersheds

Problem Description: The City of Georgetown has an outdated Master Drainage Plan. This problem is further exacerbated by frequent flooding in a portion of the study area due to inadequate drainage infrastructure and a population which has almost doubled. In addition, it has become increasingly important for an evaluation of the impact of new development on hydrologic/hydraulic conditions in these watersheds.

Project Description: The study will perform a detailed hydrologic/hydraulic assessment of the study area which would accurately identify flood problem areas, aid in the development of a practical storm water management plan to address critical flooding problems, as well as provide the City with the information it needs to manage growth and development within the study area. The study will also review and evaluate the City's outdated Flood Insurance Rate Map (FIRM) for these watersheds with the intention of submitting updated and corrected information to FEMA.

Project Duration:

24 months

ITEM SUMMARY	April 25, 2014
The application and documentation submitted by the applicant for consideration of this financial assistance has been reviewed by Contract Administration and determined to meet funding requirements.	Signature David Carter
The Texas Water Development Board is authorized to provide funding for this application, which meets legal requirements of the subject financial assistance program.	Signature General Counsel

Brazos River Authority

Research and Planning Fund Category:

Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$1,063,168
Amount Requested from TWDB	\$531,584
Local Cash	\$517,016
Local In-kind	\$14,568

Participants:

Brazos River Authority

Waller County

Brazoria County

City of Sugar Land

Velasco Drainage District

Pecan Grove Municipal Utility District

Austin County

Angleton Drainage District

Fort Bend County

City of Richmond

City of Rosenberg

City of Fulshear

City of Simonton

City of Freeport

City of Missouri City

Problem Area: Lower Brazos River watershed

Problem Description: The study area is exposed to frequent flooding due to the fact that approximately 10,000 square miles of the lower basin currently does not have any form of flood control protection. This area has a potential to produce extreme rainfall events and has already experienced major floods in the last 25 years. In addition, many locations in the study area are currently dealing with flooding issues using outdated hydrologic and hydraulic studies.

Project Description: The study will utilize Light Detection and Ranging (LIDAR) topography to develop comprehensive hydrologic and hydraulic models of the Lower Brazos River watershed. These models, in turn, will be used to analyze the feasibility of various flood reduction alternatives. In addition, this information will be used to develop flood hazard maps and will be used for development planning and regulation.

Project Duration:

24 months

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City of Conroe

Research and Planning Fund Category:

Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$270,433
Amount Requested from TWDB	\$135,216.50
Local Cash	\$117,316.50
Local In-kind	\$17,900

Participants: City of Conroe

Problem Area: Alligator Creek, Stewarts Creek, White Oak Creek North, Live Oak Branch, West Fork of Crystal Creek, Silverdale Creek, and Little Caney Creek watersheds

Problem Description: The City of Conroe is located in central Montgomery County near the Texas Gulf Coast and experiences frequent extreme rainfall events. These storm events often result in riverine flooding within the City of Conroe. Due to the fact that existing models of the streams in the City are based on older and less accurate topographic data, flooding levels in the City are not adequately reflected making it difficult to develop effective mitigation measures.

Project Description: This study will contribute to the development of a comprehensive system of hydrologic/hydraulic models which will be used to evaluate the causes and extent of riverine flooding in the City and will develop mitigation alternatives to reduce the severity and frequency of flooding within the City. The study will also produce effective methods to identify/analyze flood hazards from future developments within the City.

Project Duration:

18 months

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Guadalupe-Blanco River Authority

Research and Planning Fund Category:
Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$100,000
Amount Requested from TWDB	\$50,000
Local Cash	\$35,000
Local In-kind	\$15,000

Participants:

Guadalupe-Blanco River Authority	Hays County
City of Lockhart	Caldwell County
City of Kyle	Plum Creek Conservation District

Problem Area: Plum Creek watershed

Problem Description: The study area encompasses communities along Plum Creek, and the San Marcos and Guadalupe Rivers, which are exposed to frequent flooding events, including many major floods within the past two decades. Several of these communities have been forced to deal with this flooding using outdated hydrologic/hydraulic studies. This proposed study will be added to existing phases of study currently being performed by GBRA and the United States Corps of Engineers and with funding assistance from the TWDB, however this study is considered as beyond a federal interest and therefore will be conducted separate from the existing phases.

Project Description: The study will use a recently produced hydrologic/hydraulic analysis along with accurate Light Detection and Ranging (LIDAR) topography to produce flood hazard information that can be utilized for development and regulatory activities. Specifically, selected dams within the Plum Creek watershed will be further analyzed to determine potential flood risk associated with a dam breach scenario. Flood protection alternatives will then be assessed in order to reduce that flood risk.

Project Duration:

24 months

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Houston-Galveston Area Council

Research and Planning Fund Category:

Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$721,854
Amount Requested from TWDB	\$250,000
Local Cash	\$0
Local In-kind	\$471,854

Participants:

Houston-Galveston Area Council	City of Mont Belvieu
Chambers County	City of Old-River Winfree
Liberty County	Chambers-Liberty County Navigation District
City of Liberty	Trinity River National Wildlife Refuge

Problem Area: Lower Trinity River watershed

Problem Description: The study area is prone to out-of-bank flooding from the Trinity River and its tributaries, as well as storm surge that enters from Trinity Bay at the mouth of the river. The study area has had eight federal disaster declarations since 1992.

Project Description: The study will provide insight on how land use and development pattern changes will impact floodplain performance. This will be accomplished through flood-risk modeling and the development of Preferred Flood-Risk Development Alternatives to evaluate potential higher flood protection standards as well as other social and environmental factors.

Project Duration:

28 months

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The Texas Water Development Board is authorized to provide funding for this application, which meets legal requirements of the subject financial assistance program.	Signature General Counsel

City of Bulverde

Research and Planning Fund Category:
Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$100,000
Amount Requested from TWDB	\$50,000
Local Cash	\$42,000
Local In-kind	\$8,000

Participants:

City of Bulverde
Comal County

San Antonio River Authority
Guadalupe-Blanco River Authority

Problem Area: Lewis Creek, Cibolo Creek Tributary 19, and Cibolo Creek Tributary 20 watersheds

Problem Description: The study area has experienced many drainage problems dating from the early 1990s at the formation of the City of Bulverde. To date, a comprehensive drainage plan has not been developed for this area. A majority of the creeks in the study area have not been thoroughly studied; and historical flooding would indicate that the creeks are inadequate to carry flood discharge.

Project Description: The study will perform a comprehensive regional analysis of the study area and in the process, will establish baseline flooding conditions, identify flood-prone areas, and develop and evaluate flood protection alternatives.

Project Duration:
18 months

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The Texas Water Development Board is authorized to provide funding for this application, which meets legal requirements of the subject financial assistance program.	Signature General Counsel

Liberty County

Research and Planning Fund Category:

Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$300,000
Amount Requested from TWDB	\$150,000
Local Cash	\$150,000
Local In-kind	\$0

Participants:

Liberty County

City of Cleveland

City of North Cleveland

City of Plum Grove

Harris County

Montgomery County

San Jacinto River Authority

Problem Area: East Fork San Jacinto River, Luce Bayou, and Takrington Bayou watersheds

Problem Description: The study area includes unincorporated and undeveloped areas of Liberty County that is expected to be developed in the near future due to the start of the construction of Grand Parkway segment H in 2015. Due to significant storm events and their impact to this area in the past, there is a need to address this problem in order to provide flood protection solutions to reduce the risk to property, public safety, and critical infrastructure in the future.

Project Description: The study will create both hydrologic and hydraulic models to evaluate the impacts due to the runoff and define Base Flood Elevations in this future development area. Flood protection solutions will be developed such as channel improvements to convey runoff more effectively, regional detention to decrease peak flow rates, and development regulations to limit the increase of runoff from this future development.

Project Duration:

20 months

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The Texas Water Development Board is authorized to provide funding for this application, which meets legal requirements of the subject financial assistance program.	Signature General Counsel

City of Mansfield

Research and Planning Fund Category:

Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$293,021
Amount Requested from TWDB	\$146,510.50
Local Cash	\$146,510.50
Local In-kind	\$0

Participants: City of Mansfield

Problem Area: Hogpen Branch watershed

Problem Description: The study area of the Hogpen Branch watershed lies totally within the corporate boundary of the City of Mansfield in southeastern Tarrant County. Hogpen Branch has suffered numerous out-of-bank flooding events over the past ten-years where damage to structures, as well as flooded and impassable roadways, has occurred.

Project Description: The purpose of the proposed planning effort is to study the existing flooding problems and recommend solutions to avoid future flooding in the watershed. This study will consider impacts on the existing storm water collection system based on ultimate development scenarios. Information developed from previous studies will be reviewed and considered for inclusion into this study, or updated as necessary. Both structural and non-structural flood control measures will be considered.

Project Duration:

18 months

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The Texas Water Development Board is authorized to provide funding for this application, which meets legal requirements of the subject financial assistance program.	Signature General Counsel

Webb County

Research and Planning Fund Category:
Flood Protection Planning

Proposed Project Funding:

Total Study Costs	\$398,000
Amount Requested from TWDB	\$199,000
Local Cash	\$173,000
Local In-kind	\$26,000

Participants: Webb County

Problem Area: Bexerra Creek and Salado Creek watersheds

Problem Description: The study area consists of the area in which Bexerra Creek bisects eighteen colonias in eastern Webb County. These colonias were subdivided and platted over ten years ago before the County entered into the National Flood Insurance Program (NFIP). As such, this area was never subject to the subdivision development requirements of the NFIP and now experiences frequent flooding.

Project Description: This study will determine where current floodplain boundaries are located, will calculate the Base Flood Elevations, and will determine which structures in the study area are prone to or impacted by these flood hazards. Ultimately, a Drainage and Mitigation Plan would be established which would contribute to the successful mitigation of these flood hazards.

Project Duration:
24 months

ITEM SUMMARY	April 25, 2014
The application and documentation submitted by the applicant for consideration of this financial assistance has been reviewed by Contract Administration and determined to meet funding requirements.	Signature David Carter
The Texas Water Development Board is authorized to provide funding for this application, which meets legal requirements of the subject financial assistance program.	Signature General Counsel

ATTACHMENT C

**STAFF FUNDING RECOMMENDATIONS FOR FY2014-
FLOOD PROTECTION PLANNING GRANTS
(In Order as Ranked by TWDB Staff Review)**

Rank Order	Requested Funding	2014 Funding Recommendation
City of Georgetown	\$200,000	\$200,000
Brazos River Authority	\$531,584	\$514,783.50
City of Conroe	\$135,216.50	\$135,216.50
Guadalupe-Blanco River Authority	\$50,000	\$50,000
Houston-Galveston Area Council	\$250,000	\$0
City of Bulverde	\$50,000	\$0
Liberty County	\$150,000	\$0
City of Mansfield	\$146,510.50	\$0
Webb County	\$199,000	\$0
TOTAL	\$1,712,311.00	\$900,000